

REMARKS

Claims 1-4, 6-12, 14-17 and 19-29 are all the claims pending in the application.

I. Formalities

Applicant thanks the Examiner for initialing and returning a copy of the form PTO-1449 submitted with the Information Disclosure Statement filed on February 17, 2006.

II. Claim Rejections - 35 USC § 103

The Examiner has rejected claims 1, 10, 11, 17 and 25 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Bergenek *et al.* (US 6,241,288) ["Bergenek"] and Suzaki *et al.*, (JP 2000-194854) ["Suzaki"]. For at least the following reasons, Applicant traverses the rejection.

Claim 1 recites a fingerprint identification system that comprises "...fingerprint identification device [that]...selects a plurality of fingerprint images from said plurality of first fingerprint images based on said information of said image quality, collates said feature vector data of a plurality of said selected first fingerprint images with feature vector data of one or more second fingerprint images stored in a fingerprint data base, obtains a plurality of collating results for said plurality of collated first fingerprint images, and conducts fingerprint identification determination based on said plurality of collating results for said plurality of collated first fingerprint images." The Examiner contends that col. 16, line 24, to col. 17, line 7, of Bergenek discloses the claimed obtaining of a plurality of collating results for a plurality of collated fingerprint images and the claimed fingerprint identification determination based on the plurality of collating results for the plurality of collated fingerprint images.

In response to Applicant's arguments that Bergenek does not disclose obtaining a plurality of collating results and conducting fingerprint identification based on the plurality of collating results, the Office Action states the following:

Bergenek obviously discloses that a plurality of collating results are obtained and the fingerprint identification is conducted based on the plurality of collating results. For example, Bergenek explains that a plurality of fingerprint images are obtained and a matching procedure is performed *for each of the images* (col. 13, lines 1-3). During the matching procedure, the feature vector data of the fingerprint image is collated with feature vector data stored in the fingerprint database to produce a collating result (col. 16, lines 24-col. 17, line 7). Because the matching procedure is performed for a plurality of fingerprint images, a plurality of collating results are produced. In addition, the plurality of collating results are used during the fingerprint identification process (col. 16, lines 44-52). Thus, Bergenek clearly discloses the step of obtaining a plurality of collating results and conducting fingerprint identification based on the plurality of collating results, as recited in claim 1.

(Office Action at pages 2-3.)

Applicant disagrees that Bergenek discloses the claimed obtaining of a plurality of collating results for a plurality of collated first fingerprint images and the claimed fingerprint identification determination based on the plurality of collating results for the plurality of collated first fingerprint images.

The fingerprint process of Bergenek uses a single selected fingerprint in the identification process. Although Bergenek discloses that the Image Capture and Dynamics step 1202 may acquire multiple images, the multiple images are for sensing the dynamic properties of the fingerprint capture procedure, not the fingerprint identification portion, i.e. step 1260, of matching procedure 1200. (Col. 13, lines 3-5.) Bergenek explicitly discloses that the multiple "candidate images, if time permits, can be processed separately using the matching procedure

1200.” (Col. 13, lines 1-3, emphasis added.) There is no disclosure or suggestion that multiple candidate images are processed together.

The Office Action contends that the combination of Bergenek and Suzaki were used to disclose “the step of collating the feature vector data of the plurality of selected fingerprint images.” (Office Action at page 6.) However, even such a combination would not disclose the claimed obtaining of a plurality of collating results for a plurality of collated first fingerprint images (from the selected first fingerprint images), and the claimed fingerprint identification determination based on the plurality of collating results for the plurality of collated first fingerprint images.

Suzaki discloses that a single image is used in the fingerprint identification portion of its process. When there is no match, the process in Suzaki acquires a new image from reading section 206. (Paragraphs 0066-0067) Accordingly, although it may be possible that a plurality of images are selected in Suzuki, the final image identification determination, i.e., match or no match, is only based on a single image, not a plurality of images.

Therefore, the combination of Bergenek and Suzaki still would not disclose the claimed collating the feature vector data of a plurality of the selected first fingerprint images with feature vector data of one or more second fingerprint images stored in a fingerprint data base. The Examiner’s contention that “Bergenek further discloses that the fingerprint identification device collates the feature vector data of the fingerprint images with feature vector data of one or more second fingerprint images stored in a fingerprint data base, obtains a plurality of collating results (geometric distance) for each of the plurality of selected fingerprint images...” (Office Action at

page 5) is not supported by the Examiner's cited section of Col. 16, line 24, to Col. 7, line 7, of Bergenek.

This section of Bergenek relates to a method of searching a database using certain characteristic of a fingerprint image. (Col. 16, lines 25-27.) The characteristics correspond to points on a recognition template in N-dimensional space, which is then used find a match in a database of images for the candidate image. (Col. 16, lines 44-58.)

Applicant submits that it is clear from the description in col. 16, lines 1-58, that the disclosed process uses a single candidate image and a plurality of stored images. Accordingly, Bergenek, at most, may disclose using a plurality of images that are stored in its database, not the claimed collating the feature vector data of a plurality of the selected first fingerprint images or the claimed obtaining a plurality of collating results for the plurality of collated first fingerprint images. There is no disclosure or suggestion that the procedure disclosed in Col. 16, lines 1-58, may be adapted to process a plurality candidate images.

It is clear that the Examiner is equating a process that uses a plurality of input images for conducting fingerprint identification determination to a process that is run a plurality of times using a single input image to conduct fingerprint identification determination. Applicant submits that, contrary to the Examiner's position, there is a distinction between the two processes.

In Bergenek, although there may be a plurality of collating results when the feature vector data of the candidate image is compared with stored second fingerprint images, the collating results are only for a single candidate image. Bergenek does not disclose or suggest that a plurality of collating results are obtained for a plurality of candidate images. The fact that the process may be run multiple times for different candidate images is not relevant to the issue

at hand since the fingerprint identification determination is only based on collating results from a single candidate image, not on a plurality of collating results from a plurality of images.

Similarly, Suzuki would also only provide a plurality of collating results when the feature vector data of the highest quality image is compared with stored second fingerprint images. Suzuki does not disclose or suggest that a plurality of collating results are obtained for a plurality of images. Again, the fact that the process in Suzuki is repeated using a new image if there is no match with the initial image is not relevant since the fingerprint identification determination is only based on collating results from a single input image, not on a plurality of collating results from a plurality of images.

Accordingly, Applicant submits that Bergenek and Suzaki (taken alone or in combination) do not teach at least the claimed obtaining of a plurality of collating results for a plurality of collated first fingerprint images and the claimed fingerprint identification determination based on the plurality of collating results for the plurality of collated first fingerprint images as set forth in claim 1.

Because independent claims 10, 17 and 25 recite features similar to those given above with respect to claim 1, Applicant submits that claims 10, 17 and 25 are patentable at least for reasons similar to those given above with respect to claim 1.

Applicant submits that claim 11 is patentable at least by virtue of its dependency on claim 10.

In addition, with respect to claim 11, Applicant respectfully requests the Examiner provide evidence for his contentions that the subject matter of claim 11 would have been common knowledge.

The MPEP states:

Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion **should be judiciously applied**. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to "fill in the gaps" **in an insubstantial manner** which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. **It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.**

(MPEP § 2144.03 (E) at page 2100-144, bold added.)

Here, the Office Action does not provide either documentary evidence or a sound technical line of reasoning, and the rejection of the subject matter of claim 11 is entirely based on an unsupported contention that the subject matter is common knowledge. Accordingly, Applicant requests evidentiary support.

The Examiner has rejected claims 8, 15, 20, 22-24, 26 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Bergenek in view of Suzaki and Yamaguchi (EP 0797170) ["Yamaguchi"]. For at least the following reasons, Applicant traverses the rejection.

Because Yamaguchi does not cure the deficient teachings of Bergenek and Suzaki given above with respect to claims 1, 10, 17 and 25, Applicant submits that claims 8, 15, 20, 22-24, 26 and 28 are patentable at least by virtue of their respective dependencies.

In addition, claim 22, by virtue of its dependency on claim 1, recites that the "fingerprint identification device selects a plurality of fingerprint images from said plurality of first fingerprint images [obtained more than once for one finger] according to said image quality in an order starting from highest quality image." The Examiner concedes that Bergenek and Suzaki do not disclose this feature but applies Yamaguchi to allegedly cure the deficiency.

Yamaguchi discloses a method of registering fingerprints by checking the average number of pseudo minutiae in registering windows and registering the fingerprint when the average number is equal to or below a threshold number, which indicates a good fingerprint (col. 14, line 52, to col. 15, line 2). If the average number is above the threshold, the system in Yamaguchi selects another finger to register, and if all the fingers are above the threshold level, the best finger (finger with lowest average pseudo minutiae) is selected (see col. 15, lines 3-16). There is no disclosure or suggestion in Yamaguchi that the remaining fingerprints are registered (selected), only that the best fingerprint is registered. In addition, Yamaguchi discloses that a fingerprint of each finger is taken, not multiple fingerprints of one finger.

In response to Applicant's arguments submitted in the filing of December 27, 2005, the Office Action states:

The Examiner responds by pointing out that the claim language does not recite that the fingerprints are registered in order of quality. Rather the claim language recites that the fingerprints are registered "in an order starting from highest quality image." In this case, Yamaguchi clearly discloses that the fingerprints are registered in an order starting from the highest quality image (col. 15, lines 3-16).

Applicant agrees that the claim language recites, *inter alia*, "in an order starting from highest quality image." However, the main point of Applicant's argument is that Yamaguchi does not disclose or suggest selecting a plurality of fingerprint images from a plurality of first fingerprint images, which are obtained more than once for one finger, according to *any order*, let alone "to said image quality in an order starting from highest quality image." Yamaguchi merely discloses that the best fingerprint image is registered, not a plurality of fingerprint images.

Since the Office Action does not provide any analysis on how the cited text relates to the claimed features, Applicant made a good faith effort to analyze the cited text and concluded that the Office Action was contending that Yamaguchi taught registering in an order of quality.

If Applicant is mistaken in this conclusion, Applicant respectfully requests a substantive analysis of how the language in claim 22/1 is being construed and how the teachings of Yamaguchi are being applied. “The Office Action should clearly communicate the findings, conclusions and reasons which support them.” (MPEP § 2106.VII at page 2100-22, emphasis added.)

However, because Bergenek in view of Suzaki and Yamaguchi do not disclose the claimed selection of a plurality of fingerprint images from a plurality of first fingerprint images, obtained more than once for one finger, according to image quality in an order starting from highest quality as set forth in claim 22 by virtue of its dependency on claim 1, Applicant submits that claim 22 is patentable for this additional reason.

Because claims 23, 24 and 26 recite features similar to those given above with respect to claim 22, Applicant submits that these claims are patentable for at least reasons similar to those given above with respect to claim 22.

III. Allowable Subject Matter

Applicant thanks the Examiner for finding allowable subject matter in claims 2-4, 6-7, 9, 12, 14, 16, 27 and 29 and for indicating that these claims would be allowable if rewritten in independent form.

Applicant holds rewriting these claims in abeyance until the subject matter regarding their respective base claims is resolved.


AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/055,926

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: July 13, 2006

Attorney Docket No.: Q68222

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q68222

Masanori MIZOGUCHI

Appln. No.: 10/055,926

Group Art Unit: 2623

Confirmation No.: 1457

Examiner: Chong R. Kim

Filed: January 28, 2002

For: FINGERPRINT IDENTIFICATION SYSTEM

STATEMENT OF SUBSTANCE OF INTERVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please review and enter the following remarks summarizing the interview conducted on June 6, 2006 between Examiner Chong (Charles) Kim and Applicant's representative Bhaskar Kakarla:

REMARKS

An Examiner's Interview Summary Record (PTO-413) was attached mailed to Applicant on June 8, 2006.

During the interview, the following was discussed:

1. Identification of claims discussed: Claim 11.
2. Indication of other pertinent matters discussed: Applicant's representative requested the Examiner's reasoning in taking Official Notice of the subject matter in claim 11.
3. Results of Interview: In the Interview Summary mailed June 8, the Examiner contends that he "explained that displaying fingerprint results did not fall under either 'technical

STATEMENT OF SUBSTANCE OF INTERVIEW
U.S. Appln. No. 10/055,926


facts in the areas of esoteric technology or specific knowledge of the prior art'..." and concludes that taking Office Notice was proper.

However, Applicant's representative does not recall that the Examiner conveyed a position that the subject matter of claim 11 did not fall under either "technical facts in the areas of esoteric technology or specific knowledge of the prior art." Applicant's representative recalls that the Examiner conceded that technical knowledge within the fingerprint identification art was required in order to practice the subject matter of claim 11. However, the Examiner still contended that the Official Notice was allegedly proper because the subject matter of claim 11 was allegedly common knowledge in the fingerprint identification art. No agreement was reached.

It is respectfully submitted that the instant STATEMENT OF SUBSTANCE OF INTERVIEW complies with the requirements of 37 C.F.R. §§1.2 and 1.133 and MPEP §713.04.

It is believed that no petition or fee is required. However, if the USPTO deems otherwise, Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,


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